

Annual
**WATER
QUALITY
REPORT**
Reporting Year 2012



Presented By _____
Town of
Discovery Bay CSD

PWS ID#: 0710009

Our Commitment

The Town of Discovery Bay Community Services District and Veolia Water, our contractor that operates and maintains our facilities, are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2012. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection and community education while continuing to serve the needs of all our water users.

QUESTIONS?

If you have any questions about this report or concerns about your water utility, please contact Virgil Koehne at the Town of Discovery Bay CSD district office at (925) 634-1131 or Veolia Water at (925) 634-8818. We want our valued customers to be informed about their water utility.

Getting Involved with the Community

If you want to learn and get involved with your community, please attend the Town of Discovery Bay Community Services District Board of Directors' regularly scheduled meetings. They are held on the 1st and 3rd Wednesdays of each month, starting at 7:00 p.m. in the Town of Discovery Bay CSD office located at 1800 Willow Lake Road behind the Delta Community Presbyterian Church.

Please also view our Web site for news, current and past agendas, minutes of our board meetings, and issues that affect our community: www.toddb.ca.gov.

Board Members for 2013

Ray Tetreault, President
Mark Simon, Vice President
Kevin Graves, Director
Bill Pease, Director
Chris Steele, Director

Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the California Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

Inorganic Contaminants, such as salts and metals, that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production and that can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

In the News

This past year has been a year of progress in Discovery Bay: from the subtle to the noticeable. Discovery Bay is on the move! Some of the more obvious improvements we have seen this year are the completion of the Clipper Drive Landscape Enhancement project; the tennis court renovation project at Cornell Park; and, in February, acquisition of the Discovery Bay Athletic Club for the long-awaited Community Center. Some of the less obvious, yet vitally important improvements include the issuance of \$14.1 million in bonds to finance a number of capital improvements to the Town's water and wastewater infrastructure system. These improvements, once complete, will provide improved service and long-term system-wide sustainability.

Did you know that not one drop of our drinking water comes from the Delta? All of Discovery Bay's drinking water comes from a comprehensive series of wells that are located throughout Town and are interconnected to our two water treatment plants. In an effort to continue the flow of water to your homes, the Town is currently working on the development of a new water service well. Located off Newport Drive, Well #7 will provide water for the community and help safeguard our long-term water needs.

This past April, the Town recently held its annual Earth Day Celebration at the new Community Center, located at 1601 Discovery Bay Blvd. The community wide "Can you DIG it" was attended by hundreds of Discovery Bay residents. The Discovery Bay Garden Club placed a Blue Star By-Way marker at Slifer Park, and volunteers assisted with the placement of the memorial plaque and planted trees and shrubs around the memorial marker. Volunteers also participated in the creation of a community garden at the Community Center. Following the morning volunteer projects, a Family Festival featuring local businesses and eco-friendly vendors took place. Entertainment, food, and community spirit were evident as the day wound down with a community barbecue and concert in the park.

As your local water and sewer district, we want to remind everyone that it's important to remember to conserve water! It's a precious resource that we need to protect. Please turn your sprinklers off during inclement weather and fix any leaky water fixtures, including toilets, sinks, and sprinklers. On average, a home wastes over 10,000 gallons of water annually: enough to fill a back yard swimming pool! Be Water Wise, and when you have a leak, please repair it as soon as possible. Also, avoid pouring fats, oils, and grease down your sink. These food and personal care by-products create blockages in the sanitary sewer system that result in sewer overflows! By properly disposing of your fats, oils, and grease into your refuse container, you are helping protect the environment in an easy and conscientious manner.

The Town of Discovery Bay is presently in the process of reviewing water and wastewater rates heading into next fiscal year. It is anticipated that the study will be completed in June 2013.

Where Does Our Water in Discovery Bay Come From?

The Town of Discovery Bay CSD obtains its water from five (5) groundwater wells underlying the community. The water then flows through two (2) water treatment facilities that remove iron and manganese from our groundwater sources. The average depth of our wells is approximately 400 feet.

Water Source Assessment

Vulnerability assessments are required for all new sources under the CA Waterworks Standards (Chapter 16 of Title 22, CA Code of Regulations), which became effective March 9, 2008. Because Wells 1, 2, 4A, and 5A were all constructed and permitted prior to this date, they are exempt. A source water assessment was conducted for Well 06 of the Town of Discovery Bay water system in May 2009.

Well 06 is considered most vulnerable to the following activities not associated with any detected contaminants in the drinking water: known contaminant plumes; dry cleaners; unauthorized dumping.

Discussion of Vulnerability

A known contaminant plume of MTBE exists beneath a site on the corner of Discovery Bay Boulevard and Willow Lake Road, which used to be a gas station (located southwest of Well 06). Since the removal of three former underground storage tanks, piping, and the dispenser islands in 1998, remediation efforts have been underway for the removal of MTBE in the shallow aquifer. The plume occurs in the shallow aquifer extending to 25.5 feet below ground surface, at which a low-permeability layer 13 feet thick prevents further vertical migration. The Central Valley Regional Water Quality Control Board approved monitored natural attenuation as a corrective action method in February 2008, in part because of naturally decreasing concentration trends.

Although there is no reported groundwater contamination associated with an identified dry cleaning business, it is considered a possible contaminating activity due to proximity.

The potential contaminant activity (PCA) related to unauthorized dumping is associated with boats that have sunk and accidental spills of fuel product into the waterways that are part of Discovery Bay. From 1991 to present, there have been more than 20 reports of sunken vessels and product sheens observed in the waterways. In addition, there was a reported incident of a raw sewage leak from a resident's sewer line in 2005.

The PCAs identified in this preliminary drinking water source assessment plan (DWSAP) have the greatest potential to affect groundwater in the shallow aquifer. The proposed well will be completed in deeper confined aquifer units. The proposed well seal consists of a 180-foot grouted conductor casing. Similar to the CSD Wells, the proposed seal, along with confining clay strata will provide a barrier to potential vertical migration of shallow contamination sources. There have been no contaminants



detected in the water supply to this date in Discovery Bay. However, the proposed new source, like the existing supply wells, is still considered vulnerable to the above PCAs due to proximity.

More Information

A copy of the complete assessment may be viewed at

CA Department of Public Health, Drinking Water Field Operations Branch

850 Marina Bay Parkway, Bldg., P-2, Richmond, CA 94804

You may request a summary of the assessment by contacting

Marco Pacheco, P.E., Associate Sanitary Engineer

Phone: (510) 620-3467 • Fax: (510) 620-3455

E-mail: Marco.Pacheco@cdph.ca.gov

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. Results reflect the compiled averages and ranges from all five active groundwater wells. The state requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

* This symbol indicates a single result. Well 4A was the only source for which sampling was required for 2012. Radiological sampling frequency is based on the results of initial sampling. Some of our wells are on a 6-year frequency and some are on a 9 year frequency rate. The ranges reported for Gross Alpha and Uranium in the Regulated Substances table represent sampling from all sources for the period from 2006 to 2012.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppm)	2012	1	0.6	0.004	ND–0.02	No	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	2012	10	0.004	1.0	ND–5	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2012	1	2	0.09	ND–0.2	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chlorine (ppm)	2012	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	1.06	0.77–1.35	No	Drinking water disinfectant added for treatment
Fluoride (ppm)	2012	2.0	1	0.18	ND–0.3	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2012	15	(0)	*1.60	ND–8.63	No	Erosion of natural deposits
Haloacetic Acids (ppb)	2012	60	NA	12	9–16	No	By-product of drinking water disinfection
Selenium (ppb)	2012	50	30	2.4	ND–9	No	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
TTHMs [Total Trihalomethanes] (ppb)	2012	80	NA	49.4	41.5–57.4	No	By-product of drinking water disinfection
Total Coliform Bacteria [Total Coliform Rule] (# positive samples)	2012	No more than 1 positive monthly sample	(0)	1	NA	No	Naturally present in the environment
Uranium (pCi/L)	2012	20	0.43	*1.3	ND–5.35	No	Erosion of natural deposits
Tap water samples were collected for lead and copper analyses from sample sites throughout the community							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2012	1.3	0.3	0.510	0/32	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2012	15	0.2	2.60	0/32	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	EXCEEDANCE	TYPICAL SOURCE
Chloride (ppm)	2012	500	NS	168	81–480	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2012	15	NS	5	ND–10	No	Naturally occurring organic materials
Foaming Agents [MBAS] (ppb)	2012	500	NS	80	ND–400	No	Municipal and industrial waste discharges
Odor–Threshold (TON)	2012	3	NS	0.8	ND–2	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2012	1,600	NS	1,220	936–2,220	Yes ¹	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2012	500	NS	76.6	50–98	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2012	1,000	NS	698	550–1,240	Yes ²	Runoff/leaching from natural deposits
Zinc (ppm)	2012	5.0	NS	0.006	ND–0.03	No	Runoff/leaching from natural deposits; industrial wastes

UNREGULATED SUBSTANCES				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Boron ³ (ppm)	2012	3	2–4	Naturally present in the environment
Hardness (ppm)	2012	216	147–321	Generally found in ground and surface water
Sodium (ppm)	2012	197	124–401	Salt present in the water; generally naturally occurring

¹The conductivity of your water was found at levels that exceed the secondary MCL (maximum contaminant limit). The secondary MCLs were set to protect you against unpleasant aesthetic affects such as color, taste, and odor. Violating this MCL does not pose a risk to public health.

²The Total Dissolved Solids amount in your water was found at levels that exceed the secondary MCL. The TDS MCL was set to protect you against unpleasant aesthetic affects such as color, taste, or hardness. Violating this MCL does not pose a risk to public health.

³The babies of some pregnant women who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.

Definitions

AL (Regulatory Action Level): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard

pCi/L (picocuries per liter): A measure of radioactivity.

PDWS (Primary Drinking Water Standard): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

PHG (Public Health Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TON (Threshold Odor Number): A measure of odor in water.